

July 26, 2004
Case No.: US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 2 of 10

CLAIM LISTING:

A listing of the entire set of claims 1-27 is submitted herewith per 37 CFR §1.121. This listing of claims 1-27 will replace all prior versions, and listings, of claims in the application.

1.-13. (Cancelled)

14. (Previously Presented) An apparatus for receiving signals from a control computer and for using the signals to control a lighting device, the apparatus comprising:

a hardware device including a serial to parallel converter operable to convert the signals from serial form to parallel form; and

a lighting device microprocessor in electrical communication with the hardware device,

wherein the lighting device microprocessor is operable to receive the signals in parallel form from the hardware device, and

wherein the lighting device microprocessor is further operable to interpret the signals as commands for controlling the lighting device.

15. (Currently Amended) The apparatus of claim 14, wherein the hardware device further includes:

an edge detector circuit operable to perform a hardware edge detect of the signals

16. (Previously Presented) The apparatus of claim 14,
wherein said serial to parallel converter includes a preshift register, and
wherein said hardware device further includes a control logic operable to hold a first portion of a first signal in the preshift register until the first portion of the first signal passes a first error detection testing.

July 26, 2004
Case No.: US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 3 of 10

17. (Previously Presented) The apparatus of claim 16,
wherein said serial to parallel converter further includes a shift register; and
wherein said control logic is further operable to hold the first portion of the
first signal in the shift register and a second portion of the first signal in the preshift
register until the second portion of the first signal passes a second error detection
testing.

18. (Previously Presented) The apparatus of claim 14,
wherein said serial to parallel converter is further operable to partition a first
signal into portions;
wherein said serial to parallel converter includes a preshift register and a shift
register;

wherein, upon receiving the first signal, a first portion of the first signal is
shifted into the preshift register to be checked for errors; and

wherein, upon a determination that the first portion of the first signal is error
free, the first portion of the first signal is shifted from the preshift register into the
shift register and a second portion of the second signal is shifted into the preshift
register

19 (Previously Presented) A method for receiving and processing a lighting
control signal from a central computer, the method comprising:

operating a hardware circuit to perform serial to parallel conversion and error
detection of the lighting control signal;

subsequently conveying the lighting control signal in parallel form from the
hardware circuit to a lighting device microprocessor; and

operating the lighting device microprocessor to decode the lighting control
signal to thereby control a lighting device.

July 26, 2004
Case No.: US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 4 of 10

20. (Previously Presented) The method of claim 19, further comprising
operating the hardware circuit to move the lighting control signal from a shift register to a storage register prior to conveying the lighting control signal in parallel form from the hardware circuit to the lighting device microprocessor.
21. (Previously Presented) The method of claim 20, further comprising:
operating the hardware circuit to delay placing any further data into the shift register until after the lighting control signal has been moved from the shift register to the storage register to thereby prevent any loss of the lighting control signal.
22. (Previously Presented) The method of claim 19, wherein the serial to parallel conversion and error detection of the lighting control signal includes:
operating the hardware circuit to shift a first portion of the lighting control signal into a preshift register to be checked for errors; and
upon a determination that the first portion of the lighting control signal is error free, operating the hardware circuit to shift the first portion of the lighting control signal from the preshift register into a shift register and to shift a second portion of the lighting control signal into the preshift register.
23. (Previously Presented) A hardware device for interposing between a computer controlled lighting device and a control computer that controls the lighting hardware device, the hardware device comprising:
means for transmitting and receiving serial signals indicative of commands and data to control the lighting device;
means for ensuring that said data and commands include edges at predetermined times; and
means for converting the serial signals to parallel form and conveying the signals in parallel form to a microprocessor for decoding and for utilization in controlling the lighting device.

July 26, 2004
Case No.: US010023 (7790/337)
Serial No.: 09/768,921
Filed: January 24, 2001
Page 5 of 10

24. (Previously Presented) A method of receiving a signal from a central computer to control a lighting device, the method comprising:

(a) placing a first portion of the signal into a preshift register, and checking the first portion of the signal for errors;

(b) shifting the first portion of the signal from the preshift register into a shift register if the first portion is error free; and

(c) repeating (a) and (b) for each remaining portion of the signal before shifting the signal out of the shift register to thereby control the lighting device.

25. (Previously Presented) The method of claim 24,

wherein the signal is shifted out of the shift register in response to commands from a separate set of arbitration control logic

26. (Previously Presented) The method of claim 25,

wherein the arbitration control logic also controls a manual override for controlling the lighting device manually.

27. (Previously Presented) The method of claim 24,

wherein a determination of an error of a first portion of the signal in the preshift register causes a retransmission of the first portion of the signal from the central computer.